

The Claims

1-16. (Canceled)

17. (Previously Presented) A consumer electronic apparatus having a layered architecture including several logical layers, including a hardware layer and plural higher layers that are progressively more independent of hardware, the apparatus being further characterized by:

- an input for receiving first content data, and also including a memory and an output device;

- a watermark decoder in said hardware layer, operative to decode plural-bit watermark data steganographically embedded “in band” within said received content data, and to provide the decoded watermark data to a higher layer in said architecture;

- processing circuitry responsive to software instructions stored in said memory, said processing circuitry thereby being operative to:

- define a software interface through which watermark decoding functionality provided by said watermark decoder can be invoked by said apparatus, the software interface masking details of a particular hardware design by which said watermark decoder is implemented;

- launch a web browser, if a web browser is not already running;

- utilize said web browser, in accordance with watermark data decoded by said watermark decoder, to obtain auxiliary content; and

- render content for output using said output device, said rendered content including both said first content data, and auxiliary content obtained through use of said watermark data.

18. (Previously Presented) The apparatus of claim 17 in which the first watermark decoder is operative to decode plural-bit watermark data steganographically embedded within audio content.

19. (Previously Presented) The apparatus of claim 17 in which the first watermark decoder is operative to decode plural-bit watermark data steganographically embedded within still image content.

20. (Previously Presented) The apparatus of claim 17 in which the first watermark decoder is operative to decode plural-bit watermark data steganographically embedded within video content.

21. (Previously Presented) A portable apparatus having a processor, memory, a wireless interface, one or more input devices including a 2D image sensor, and one or more output devices including a display screen, the apparatus operative to make phone calls, send email, and display received video data, the apparatus characterized by a watermark decoder operative to decode plural-bit watermark data steganographically embedded “in band” within digital audio or video content data received using the wireless interface and processed by said apparatus, the apparatus further comprising software instructions in said memory causing said processor to define a layered stack of protocols and a software interface through which a request to invoke watermark decoding functionality can be passed down from a higher layer to said watermark decoder, and through which results of watermark decoding can be returned up to said higher layer, the software interface serving to mask implementation details of said watermark decoder from said higher layer, wherein said higher layer is operative to employ said decoded watermark data in connection with an application selected by a user.

22. (Previously Presented) The apparatus of claim 21 wherein said higher layer is operative to render content to a user, the rendered content including the digital content from which the watermark was decoded, and auxiliary content obtained by reference to said decoded watermark data.

23. (Previously Presented) The apparatus of claim 21 in which the watermark decoder is operative to decode watermark data from image data captured from the 2D image sensor.

24. (Previously Presented) The apparatus of claim 21 in which the watermark decoder is operative to decode watermark data from audio data.

25. (Previously Presented) The apparatus of claim 21 in which the watermark decoder is operative to decode watermark data from received video data.

26. (Previously Presented) The apparatus of claim 21 in which said application comprises an email application.

27. (Previously Presented) The apparatus of claim 21 in which said application comprises a phone application.